

Background

- Viral hepatitis is a common problem in the incarcerated population.
- Causes significant morbidity and mortality
- Inmates receive their healthcare almost exclusively from publicly funded corrections-based health systems

Epidemiology

- Seroprevalence of hepatitis A virus infection in inmates is similar to nationwide rates
- Seroprevalence of exposure to hepatitis B virus infection in inmates is greater than four times higher than the general US prevalence rate
- Seroprevalence of exposure to hepatitis C virus is approximately twenty times higher in the US incarcerated population than the general US prevalence rate
- 12-35% of inmates have chronic HCV infection
- 29-43% of HCV-positive Americans encounter correctional facilities every year

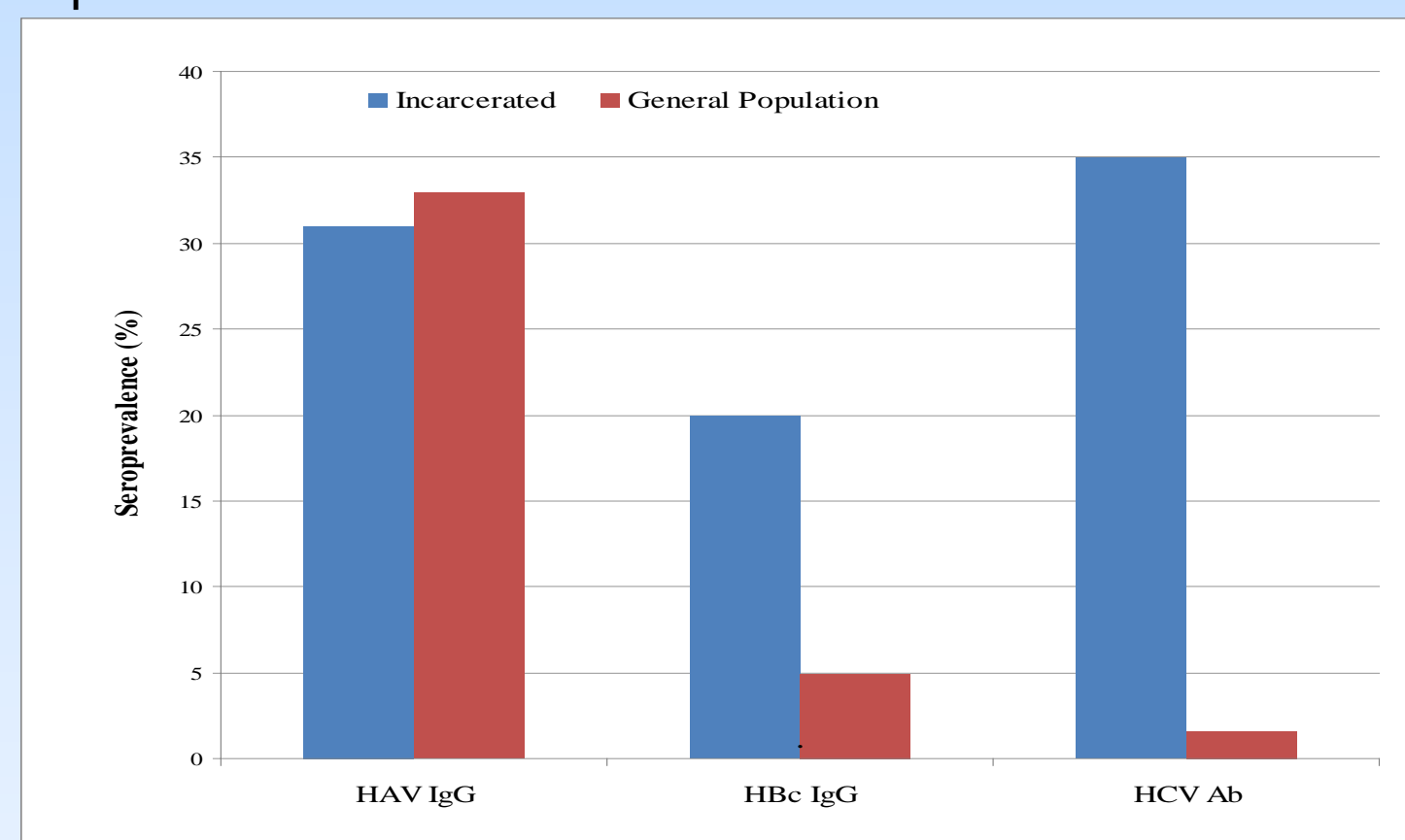


Figure 1. Comparison of US estimates of seroprevalence of exposure to viral hepatitis among inmates vs. the general population.

Risk Factors

- High risk behaviors are more common and carry higher risk in prison
- Injection drug use (IDU): the most well-defined risk factor for viral hepatitis in the incarcerated population
 - Variable rates of IDU among inmates are the most important cause of the marked variability of prison seroprevalence rates for exposure to HCV (Figure 4)
 - IDU inmates are 24 times more likely to have HCV positivity
 - IDU inmates are 8 times more likely to contract HCV in prison
 - IDU in the prison setting may carry a higher risk of HBV/HCV transmission than IDU in the community, largely due to lack of sterile IDU supplies
- Sexual activity: almost certainly more risky than sexual activity in the community
 - Sex is usually unprotected due to lack of available condoms
 - Commonly occurs between same-sex inmates with high rates of IDU, HCV, HBV
- Tattoos: independent risk factor for HBV and HCV in prison
 - Risk of transmission from tattoos is higher in prison, and prevalence of tattoos 3 times higher among inmates than general population

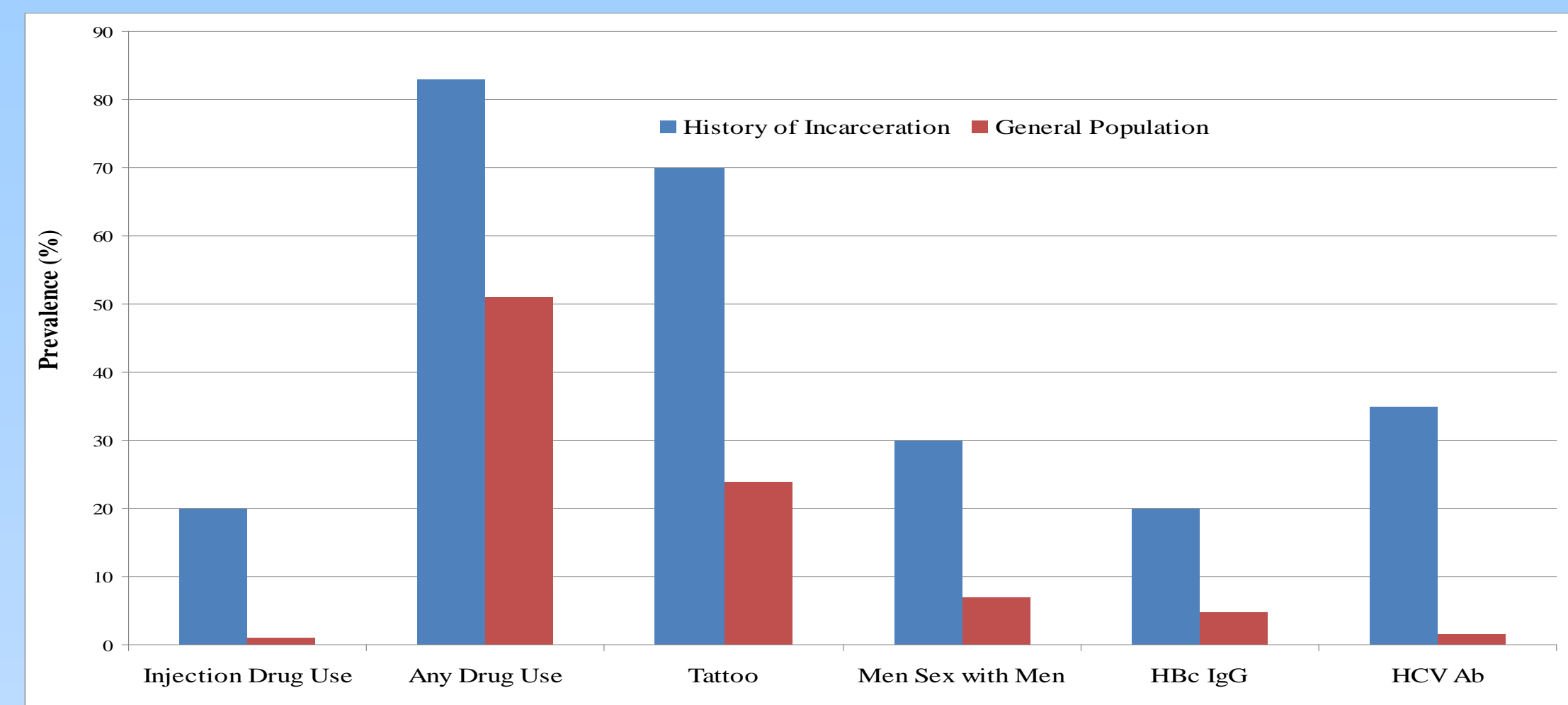


Figure 2. Comparison of US estimates of lifetime prevalence of viral hepatitis risk factors and seroprevalence of hepatitis B and C virus exposure among inmates vs. the general population

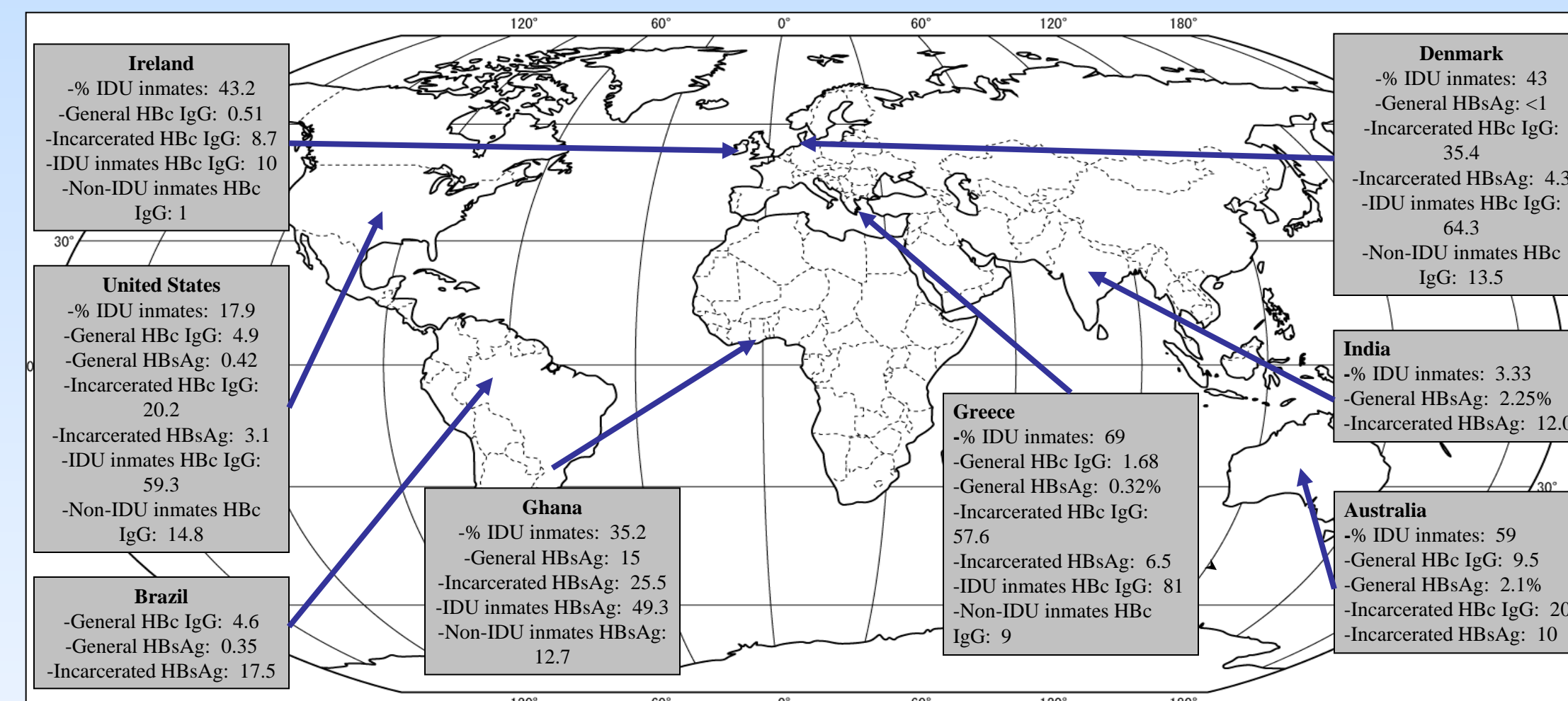


Figure 3. Worldwide comparison of seroprevalence (%) of markers of exposure to and infection with hepatitis B virus among inmates vs. the general population.

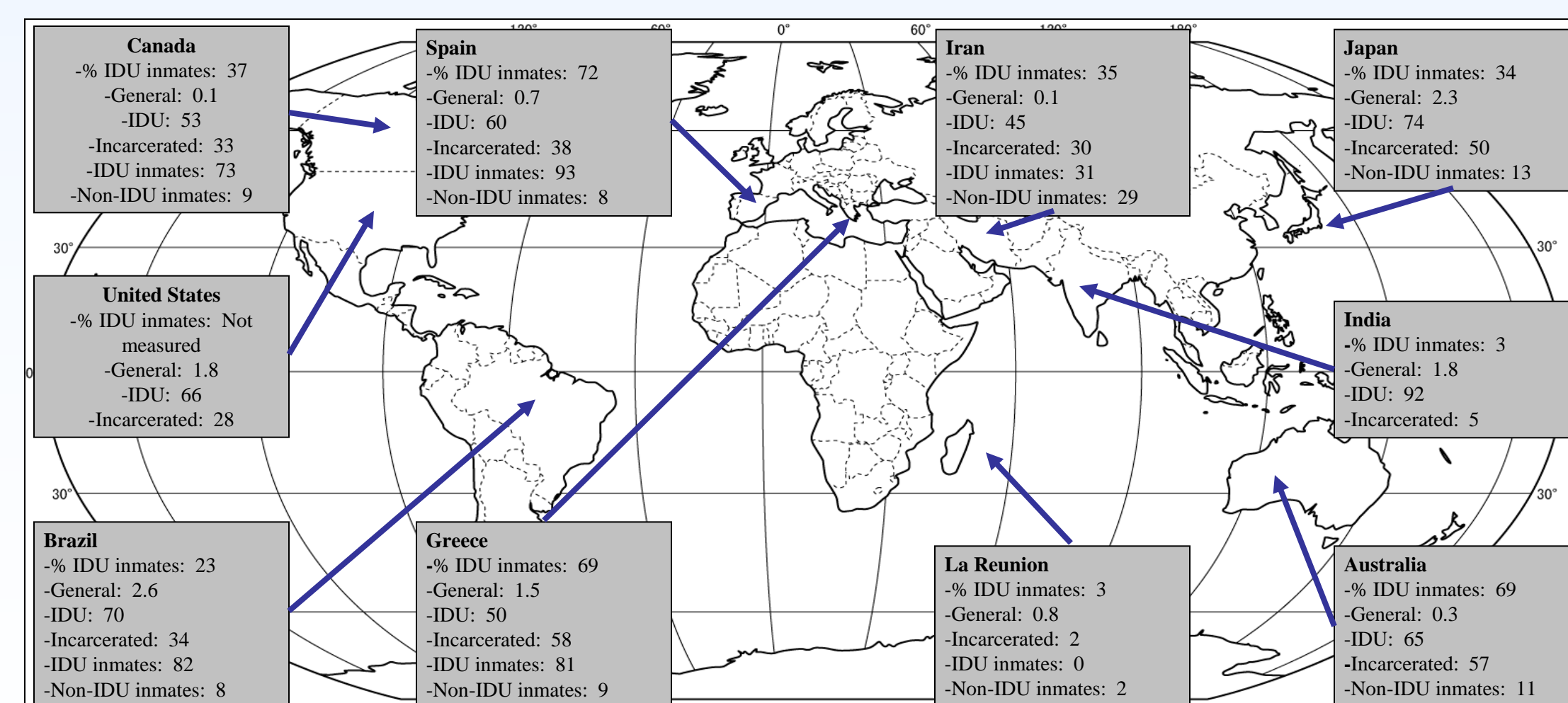


Figure 4. Worldwide comparison of seroprevalence (%) of markers of exposure to hepatitis C virus among inmates vs. the general population.

Risk Reduction

- Pre-exposure prophylaxis: Can reduce risk of viral transmission of HAV, HBV among inmates
 - Recommended for all high risk inmates: IDU, underlying liver disease, men who have sex with men, known exposures
- Condoms: Can decrease risk of transmission
 - Provided to inmates in few US correctional facilities but in many correctional systems abroad
- Needle exchange programs: Clearly shown to reduce risk of transmission in prisons
 - No needle exchange programs exist in US prisons
 - Successful programs exist in >50 prisons in 8 different countries
- Methadone maintenance treatment: Shown to reduce drug use, IDU, mortality, reincarceration, and HCV rates
- Substance abuse/behavioral counseling: Shown to decrease drug use and risky sexual behavior outside of prison, and prevent reincarceration

Antiviral Therapy

- Inmates with acute or chronic HCV infection should be considered for antiviral therapy
- Small number of studies have demonstrated that sustained viral response rates among inmates treated with interferon/ribavirin are similar to rates from the community at large
- Recent Markov model demonstrated that treatment with pegylated interferon/ribavirin is cost saving, with the exception of treatment of inmates between the ages of 40 and 49 with genotype 1 and no fibrosis
- Barriers to antiviral treatment:
 - Lack of post-release follow up prevents many inmates incarcerated<1 year from being candidates for treatment
 - Lack of specialists to administer treatment/perform liver biopsy
 - High prevalence of psychiatric co-morbidities

Conclusions

- Viral hepatitis in inmates is a significant issue, affecting a large number of inmates as well as the general population
- Risk behaviors are more common and carry higher risk among inmates
- Risk reduction/management strategies are largely underutilized in the US—likely due to financial, ethical, and political considerations
- Additional funding, research, and formal consideration/discussion of the complex issues involving viral hepatitis in the US incarcerated population are clearly important for the sake of inmates and the community at large

References

- Hunt DR, Saab S. Viral Hepatitis in Incarcerated Adults: A Medical and Public Health Concern. American Journal of Gastroenterology 2009;104:1024-1031.